# ALTERNATIVE METHODS OF FUNDING FOR EDUCATION

A Report Prepared for the Task Force on Reassessment in Metropolitan Toronto
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## Terms of Reference

### Alternative Methods of Funds for Education

1. To identify and evaluate alternative methods of funding for education with particular emphasis given to alternatives which would remove the education component from the property tax base and be funded from more broadly based sources of revenue.

2. To analyze the effect of pooling the commercial assessment across the Province of Ontario with particular emphasis on identifying the impact on residential taxpayers of Metropolitan Toronto and to analyze the effect of coterminous pooling of corporate assessment within Metropolitan Toronto.

3. To prepare a report on the above which should include a discussion of principles on which each alternative is based, the financial order of magnitude of each alternative where appropriate, the advantages and disadvantages of each, the identified and/or the potential impacts on municipal taxpayers or groups, the experience in other jurisdictions of the alternatives where appropriate, and some concluding comments.

## Executive Summary

### Introduction

The desire to replace all or a portion of the property tax with alternative revenue sources to finance education stems from a dissatisfaction with property taxes themselves or the effect that the financing system, incorporating property taxes, has on the delivery of education itself. While the Ontario government has, through the post war years, become more involved in local education, each 'solution' to the current problem has been followed by new schemes to provide more equitable access to education using more efficient and fair sources of revenue while trying to preserve local autonomy. A variety of schemes have failed (a) to produce complete wealth neutrality and (b) quiet the critics of property taxation.

A good system of financing education is difficult to define because, in part, it depends upon one's view about the degree of centralization reflected in education policy. Nevertheless, there appears to be a consensus that the tax revenues used to finance education should be derived from taxes that do not distort choices of resource allocation in the economy and are deemed to be fair or equitable taxes; that is treating equals in an equal manner and treating unequals in a manner that reflects ability to pay. Furthermore, taxpayers ought to be aware of the tax they pay and those that provide the public service held accountable for the levies.

On the expenditure side, there is widespread agreement that

access to education should not be denied because of personal or local wealth. This is achieved through the provision of equalization grants that assist less wealthy communities to reach a mandated per pupil level of expenditure without imposing undue taxation on households in the form of higher than average mill rates. This works up to a point. Out of the $10 billion spent on education in Ontario in 1988, almost $2 billion was for expenditures over and above those recognized and assisted by the province. Not only are there significant differences in per pupil assessment across school boards but with varying ratios of non-residential to residential assessment, some school boards find it less burdensome to raise education dollars than others.

In Toronto, there is a unique problem. By virtue of the legislation establishing Metropolitan Toronto in 1953, there is one metro wide board and 6 municipal school districts. Each contributes to a central 'pool' of tax revenue according to a formula that weights non-residential assessment higher than residential assessment. The result is a mismatch between own-source revenue and expenditures since expenditures in each municipality are more closely tied to enrolment, not assessment.

Financing Education

While local sources of funding for education have becomee less important in recent years, in Ontario, the share of total education shouldered by local government has increased from 37.4 per cent in 1974 to 46.9 per cent in 1985. Virtually all of this local revenue

has been drawn from the property tax base. This has not been the case in other parts of Canada. New Brunswick and Prince Edward Island have no local property tax for education. In Quebec, only 5 per cent of local education is financed from a local property tax and in British Columbia, the province pools the non-residential assessment and flows the money from this tax back to school boards on the basis of need, enrolment, etc... In Australia, local property taxes are not employed to finance elementary and secondary education: the funds come from the state and federal governments.

Concerns About Property Taxation

One of the major reasons for wishing to reform the current system is dissatisfaction with the property tax. Unfair assessment results, a regressive impact on income distribution and undesirable resource allocation effects are alleged faults with the tax. To be fair, the property tax should be based on market value if it is tc reflect wealth and ability to pay. Failing that, the assessment to market value ratio ought to be similar within and across jurisdictions in the province. The evidence shows clearly that these objectives have not been achieved and there are wide variations in the ratio of assessment to market value in municipalities in Ontario.

The question of property tax incidence is more controversial now than it was 20 years ago. Until the mid 1970's, it was widely recognized that the property tax was regressive; the ratio of tax paid to income declined as income rose. Alternatively, if the tax

is deemed to be shifted forward onto prices of goods produced using real estate, it is an excise tax and as such, is also regressive. These results are modified somewhat if average income over one's working lifetime, is used in place of current, annual income to measure the tax to income ratio. The tax becomes proportional at least. The fact remains that the tax has to be paid out of current income. It is little solace to the retired couple on a small pension that their lifetime income is higher than their current income.

A more modern view emphasizes that the property tax is, when considered a national tax, a tax on capital and since income from capital is concentrated in the hands of upper income groups, the tax is progressive and hence equitable. Since the tax is not uniform across all jurisdictions, there are differential effects similar to excise taxes as well. The conclusions of these analysis have been the subject of much careful scrutiny and a variety of measures employed to measure the incidence of the property tax. While the results are mixed, there would now seem to be a consensus that the tax at worst, is not as regressive as was once thought.

The property tax, as imposed in Canada, is not necessarily neutral in terms of resource allocation. Households and firms will take into account large differences in property taxes in making decisions regarding housing and location, especially if the differences in tax burdens are not reflected in different levels of public services.

The indeterminancy surrounding the property tax and the

strength of conflicting views on incidence and economic effects has been a stimulus for reform. Coupled with the lack of complete wealth neutrality in terms of the delivery of education, a variety of options have been suggested.

Education Finance Reforms

To achieve wealth neutrality (where per pupil expenditure on education does not depend on differences in wealth between school board districts), grant schemes can be put in place to ensure that any level of per pupil expenditure is fully equalized. Alternatively, the level of ordinary expenditure can be set as a ceiling, regardless of what a school board wishes to do, thereby ensuring identical per pupil expenditure on education.

If the composition of the tax base is the major concern, it is always possible to pool the assessment from commercial/industrial property and distribute the revenue back to school boards on a per pupil basis. Such a reform will obviously result in winners and losers and mechanisms to 'buy' the support of potential losers would perhaps, have to be instituted to bring about reform. Inequitable tax burdens resulting from inconsistent assessment procedures can be reduced by ensuring that municipalities undertake periodic reassessment of properties or move to a system of market value assessment, to be updated on a regular basis.

Most recently, the Ontario Commision on Financing Elementary and Secondary Education considered several alternatives to the

current system including (1) increasing the provincial responsibility for education to 80 per cent, (2) fixing the maximum revenue to be derived from non-residential assessment and raising one third of the cost of education by levying a special income tax, (3) the use of the two current tax bases (residential and non-residential assessment) and provincial grants along with a personal income tax credit for residential taxes, (4) replacing the current system without 100 per cent provincial support for education. The Commission favoured option number 3.

Vouchers for education are another option and while the idea has been advanced on a number of occasions, it would appear that it is not likely to be seriously considered. It would be a radical departure from current practices anywhere in Canada.

The idea of a personal income tax to finance education costs is attractive for several reasons. If it was administered provincially, it would fit into the current system of taxation. It is considered a more fair tax than the property tax. The redistribution of the tax revenue back to the school boards would produce an education supply that was wealth neutral. Education, it is argued, is of such importance to the province that the level of service should be set by the province and through the use of a personal income tax, there will be uniform rates across the province. Aside from some administrative problems (that could eventually be overcome) and the fact that personal income rates would go up, the major opposition to this scheme has to do with local rights. Without the right to set their own tax rate to raise

a significant share of the cost of education locally, school boards would not be as accountable to the taxpayers as they are at present. It boils down simply to whether or not one believes in wealth neutrality, categorical equity or local self-determination. The income tax could be levied locally and combined with an education equalization grant, wealth neutrality (restricted or universal) could be achieved. The administrative costs would be higher.

Simulating Some Options

Once the theoretical issues are discussed and digested, there is the very important, practical matter; who stands to gain (or lose) either as a municipality or personally from any reform? The simulations undertaken in this study can be classified into three categories; effects on Metropolitan Toronto due to province-wide reforms; effects within Metro as a result of Metro-only reforms and effects on income distribution in general from one Ontario-wide reform.

Pooling non-residential assessment or total assessment, replacing part or all of the property tax with a provincial income tax and redistributing the revenue from such a scheme on a per pupil basis result in Metro receiving less education tax dollars than under the current scheme. For example, province-wide pooling of commercial-industrial assesment (for education) and returning the tax revenue to the school boards on the basis of enrolment would result in Metropolitan Toronto receiving $214 million less

than under the current system. Most of these schemes, however, reduce the wealth inequalities among school boards and as a result, there would not be the same need for equalization grants to low per pupil assessment boards. These 'savings' could than be used to offset some or all of the initial revenue loss experienced by more 'wealthy boards', such as Metro.

## The Special Problem of Metropolitan Toronto

The current arrangement within Metro results in a notable 'fiscal imbalance' for four of the six municipalities. In Scarborough and York, current expenditures exceed the municipalities contribution to the Metro levy. For Toronto and Etobicoke, expenditures are less than the revenue levy. Replacing the property tax in Metro with a personal income tax (the same rate everywhere) and distributing the proceeds of the tax back to the municipalities on a per pupil basis, would result again, in a 'fiscal imbalance' with Toronto and Scarborough contributing considerably more to Metro than they would receive back in grants.

## Incidence Effects of A Personal Income Tax

While municipalities are rightfully concerned how any reform will impact on their fiscal position, individuals are naturally concerned about the impact of tax reform on their after tax income. For Ontario, the property tax as a percentage of family income declines as income rises and replacement of the property tax for

education with a proportional tax on total family income, benefits those in the first five deciles of the income scale. The losses in the sixth, seventh and eighth decile are quite small and in the last two deciles, they are still smaller than the gains in the first two deciles.

## Conclusion

If it is assumed that major reforms to the property tax are going to be expensive and difficult, there are alternatives that are attractive from both the equity and efficiency point of view. These options could be structured to guarantee wealth neutrality, allowing local school boards some autonomy and provide at least some compensation for those school boards that would lose revenue as a result of reform. The precedent has been set. In 1989-90, the Province will provide $180 million to offset losses incured by school boards that are involved in coterminus sharing of the non-residential tax base. There are uncertainties and risks associated with any change but there are obvious gains as well. How these match up depends to some extent on one's view about the inadequacies of the property tax, the issue of local accountability and education, and the importance of equal access to education.

# Alternatives to the Present Methods of Financing Elementary and Secondary Education in the Province of Ontario

## A. Introduction

The desire to consider alternatives to the current system of financing elementary and secondary education stems from either dissatisfaction with the method of raising one or more sources of revenue or, the undesirable effect the system of financing has on the delivery of education itself.[1] Perhaps both are reasons for the review but the terms of reference do not indicate one or the other. The following list, therefore constitutes the major reasons that have been advanced in recent years for the restructuring of education finance.

### A.1 Faults With The Revenue System

1. The property tax, a major component of the total revenue used to finance education is alleged to be a regressive and hence, unfair, tax.
2. The property tax base does not reflect rising costs in a regular consistent fashion.
3. Reliance on lump-sum conditional grants from the provincial government to the school board, to finance a major portion of local education creates considerable uncertainty.

4. The "mix" of the property tax base (residential, commercial/industrial and agricultural) leads to inequities across school boards because of differences in assessment practices and differences in actual wealth.

A.2 Effect of the System on Education

1. Long term planning at the board level is extremely difficult given the reliance on provincial support and provincial discretion to alter grants and their conditions from year to year.
2. The system (property tax revenue, general grants plus equalization and special grants) is not 'wealth neutral'; that is, wealthier communities find it less burdensome to raise property tax revenues for additional outlays on education.

While not an exhaustive list of reasons for a review of the current system, the above highlight the majority of concerns that have been expressed by both local and provincial politicians and officials. In some provinces, the concerns have led to major reforms to the system of school financing (see Section B below) and the growing opposition to the present system in Ontario suggests that reform in Ontario is overdue. Before proceeding to examine the basic principles of public finance for schools and

options for Ontario, a very brief overview of the past and current system of financing seems warranted.

## B. Post War Financing of Education in Ontario

Major provincial involvement in the financing of education in Ontario came in 1943 when the government under George Drew promised to fund one half of the cost of elementary and secondary education in the Province. This was achieved in 1945 but a ceiling was placed on provincial involvement by limiting the support to "provincially-approved" expenditures. The next major change did not occur until 1958 when equalized assessment was included in the grant formula. Differences in ability to pay across school boards, measured by per pupil or per capita taxable assessment, gave rise to different grants. Obviously, such a scheme led municipalities to under-assess real property in order to maximize their grants. In reply, the province had to introduce its own equalization factors and "adjust" local assessments.

In 1964, a new funding model was introduced: the Ontario Foundation Tax Plan. The province provided a conditional grant to each school board on a per pupil basis based on the following formula

$$G_i = (X_p)(N_i) - t_p * A_i$$

where
$G_i$ = grant to ith school board
$X_p$ = provincially determined cost of education per pupil
$N_i$ = number of pupils in a school board
$t_p$ = provincially established mill rate
$A_i$ = equalized assessment in ith school board

Expenditure per pupil in any board could exceed $X_p$ but if so, there was no provincial support for the additional expenditure. As we shall see later, this violates the principle of wealth neutrality.

There were no major changes in the formula until 1969 although a variety of special grants were introduced and others changed to reflect higher costs in the north and other special needs. The Variable Percentage Grant Plan was introduced in 1969, designed to ensure equality of opportunity through the payment of equalization grants. The formula for the grant is rather complicated.

$$G_i = \left[ (100-(R)(A^*_i/N_i) \quad \frac{\sum_1^n (A^*_i/N_i)}{n} \right] (E)(N_i)$$

where $G_i$ = grant to the ith school board
$R$ = rate of support for the average school board, set by the province e.g. 0.48
$A^*_i$ = equalized assessment for ith school board
$N_i$ = number of pupils in the school board
$n$ = number of school boards
$E$ = recognized per pupil expenditure

The term in the square bracket is the actual rate of support for the individual board. The complex fraction is composed of the following:

| | |
|---|---|
| Numerator: | a provincially fixed percentage, e.g. 48 per cent multiplied by the per pupil equalized assessment in a given board |
| Denominator: | the per pupil equalized assessment summed across all school boards divided by the number of school boards |

For example, if all school boards were identical in terms of need and wealth per pupil, then the term to the right of the (100-R)

would be one and the term in the full square bracket which is the rate of support for each board, would be identical.

This scheme was changed in 1978 to the Mill Rate Equalization Plan (MREP). The formula for this grant (which is still in effect) is

$$G_i = N_i * E - r^e * A^e_i$$

where $r^e$ is the equalized mill rate, provincially determined. The MREP is similar to the 1964 Foundation formula in that there is no support for expenditures above the level E. The grant scheme was however, further complicated by weighting factors for differences between technical and vocational education, transportation, French language and special needs.[2]

Regardless of all these changes, property taxation has remained a major component of the revenue sources for education with the share of education financed from this source varying between 40 and 60 per cent over the post war period. While their are reasons to be dissatisfied with this tax, in general, as a source of education finance, a good deal of the concern appears to stem from how the tax fits into the overall scheme of financing education. Before examining these in more detail, especially in terms of any reforms, certain basic principles regarding education finance are explored.

## C. Principles of Education Finance

It was noted earlier that the issue of financing elementary education can be divided into two broad, but related, topics: the revenue system itself and the link between the revenue system and supply of education.

### C.1 Revenues to Finance Education

Efficiency in a tax system is measured in terms of the extent the tax does not interfere with resource allocation in the economy. The more individuals and corporations alter their behaviour to avoid or reduce the burden of a tax, the more inefficient the tax. The only strictly efficient tax would be a lump sum tax imposed on each person who was a citizen of a country or geographical area; in other words, a poll tax.[3] The only avoidance measure is to migrate out ot the jurisdiction imposing the tax. The property tax is clearly not a purely efficient tax by any means and major works have been written to describe and analyze distortions in resource allocation due to property taxes. This issue is discussed in detail in a later section of the paper.

Fairness or equity in taxation is usually divided into two categories; horizontal equity and vertical equity. The first states that individuals in similar circumstances should be treated similarly by the tax system. While the principle is simple enough (and strikes a chord of natural justice in most people) deciding

what is meant by "similar circumstances" makes the application of this principle difficult. Vertical equity says that people in different circumstances ought to be treated in a different manner by the tax system. Again, a sound principle but deciding upon what it is that makes people different (under the tax system) and how to measure those differences and apply different tax laws is a matter of personal and political values. The property tax has long been criticized as a tax that violates both principles of equity although recent research suggests that the degree of regressiveness may not be as acute as once thought. This issue will also be discussed in more detail later. Nevertheless, given that (a) assessed values may not accurately reflect relative market values for property and (b) property wealth may not correlate with income, there is widespread opposition to the expansion of property taxes as a source of education finance.

A good tax system or tax should not be expensive to collect. In the case of the property tax, minimizing the collection of cost may well result in a more inefficient and inequitable tax. To ensure that property assessment reflects market value on an annual basis in all communities would be expensive indeed.

Flexibility in a tax in terms of responding to economic conditions is also considered a positive characteristic.[4] If wages, salaries and costs are rising, the tax base should automatically reflect this but in the case of real property, these factors will be reflected only if the property is sold and re-assessed.

If taxpayers are aware of the relationship between the cost of a public good, reflected by their personal tax burden, they will be in a better position to make decisions as voters about the tax price of public goods. For most of the public sector this cannot be done since there are few "earmarked" taxes. This is not the case with education and the property tax. People are generally aware of the property taxes they pay and in some cases, the education component of that tax.[5] This can be misleading however, since property taxes constitute only 55 to 60 per cent of the true cost. The relationship between the actual cost of education and the local tax price may be blurred considerably.

Finally, accountability is also important in taxation. One of the strongest reasons advances for decentralized public goods supply has to do with the taxpayer's/voter's access to those (politicians) who are spending the money.[6] It is much easier for one to appear before the local school board and argue about a new curriculum than it is to appear before the House of Commons to argue about defense spending.

## C.2 The Expenditure Side

One of the overwhelming principles to emerge in recent years regarding school finance is the notion of equality of opportunity and wealth neutrality. In some ways, this can be seen as 'reverse' equity; that is, those in different circumstances ought to be treated equally under the system of public finance. It is a

principle of categorical equity that means identical levels of service across all persons for certain categories of expenditure. Alternatively, if there are differences in actual levels of service, they should not bear any relationship to a person or family's ability to pay for that service by way of taxation or any other public levy.

The use of any existing tax by a school board to finance education exclusively from that source would, in Ontario at least, violate the principle of categorical equity. Expenditures on education might be made wealth neutral <u>within</u> a school board but not <u>across</u> school boards as long as there were differences among school board areas in per pupil or per capita assessment, income or any other tax base. The payment of equalization grants by the Province to school boards is designed to achieve wealth neutrality or reduce categorical inequities.

## D. <u>Major Problems With The Current System</u>

A broad summary of the major concerns pertaining to financing elementary and secondary education were outlined earlier. This section looks as these problems in more detail from, first, the school board's viewpoint and second from a provincial (not necessarily government) perspective. Concerns about the property tax itself are dealt with in detail in Section G below.

## D.1 Inflexibility and Uncertainty of the Current System

Property taxes do not respond automatically to changes in general economic conditions. To increase (or decrease) the revenue from a unit of real estate it is necessary to either change the mill rate applied to the current (last) assessment or revalue the real estate according to current market transactions of similar properties. While an individual's ability to pay the property tax is based (largely) on income that responds to changing economic circumstances, the tax liability possesses much less flexibility. The uncertainty of the present system is tied to the general grant which the province can vary at any time shifting more or less of the burden of education costs to the local boards of education. In short, provincial support for the financing of elementary and secondary education is, is the short run, at the whim of current provincial policies making long term planning at the local board level difficult.

## D.2 The Tax Base and Its Composition

In communities with a substantial portion of the total assessment represented by commercial/business activity, the burden of any increase in tax revenue per pupil on residential property is far less than in those communities where the assessment is almost all residential. While it is likely that a substantial burden of the residential tax will be borne by the owners of these

properties there is much greater likelihood that the tax on commercial/industrial property will be exported outside the community. (Auld, 1985b) Since it is residents who possess the voting power and for the most part are parents of children in the schools, there will be a natural tendency to favour increased taxation for education purposes in communities with large commercial/industrial tax bases, irrespective of differences in wealth. While wealth neutrality may be achieved through a system of grants, the mix of assessment may result in different marginal expenditures per pupil with attending different qualities of education across school board districts.

It is possible that the existence of a large block of commercial/industrial assessment could lead to a tendency in the opposite direction if such assessment represented business activities where the prospect of tax shifting was limited. The owners of such properties might represent a strong lobby against further tax increases on the grounds that additional levies would threaten the existence of their businesses.

## D.3 Efficiency, Equity and the Property Tax

Until the early 1970's, the property tax it was generally agreed that the property tax was a regressive tax and its use should be restricted. Research by Mieszkowski (1972) suggested that it was a progressive tax or proportional tax. Today, the debate still continues but there is a widespread perception among

politicians and officials that it is a regressive tax. After all, it is quite visible to politicians that pensioners living in their own home find it difficult to pay increasingly higher property taxes year after year. The non-neutrality of the tax is obvious. Business location is affected by differential assessments and rates. Improvements to property may be postponed because of tax changes limited to such expenditure and residential location may be affected by differences in assessments between neighboring jurisdictions. The issue, however, is far more complicated than this and section G below addresses the major concerns of the property tax in detail.

### D.4 Unequal Opportunity of Education

The current system is not wealth neutral.(Auld, 1985c) If a wealthy community wishes to expand education expenditures per pupil beyond the recognized level by a given amount, it will take a smaller mill rate increase than would be the case in a less wealthy community. What we have in Ontario currently is restricted wealth neutrality where, up to the level of recognized expenditures per pupil, access to roughly equal value education is independent of community (school board area) wealth as measured by real property assessment.

Is wealth neutrality a fundamental principle of local education delivery? In the United States, a series of court decisions in the 1970's said yes.[7]

The usual view of local government finance involves decentralized finance allowing the mix of public services to reflect a variety of local "collective" preferences. Even in the case of non-education public services at the local level, the provincial government provides equalization grants to less wealthy communities.(Auld and Eden, 1987) One must be careful to note that wealth neutrality does not mean identical expenditure per pupil in all school boards; it means that expenditure per pupil must not be a function of local wealth. From a tax point of view, each additional unit of education per pupil should require the same mill rate increase across all school boards.

## E. The Special Problem of Metropolitan Toronto Finance

In the report that led eventually to the establishment of a Metropolitan form of government in Toronto, it was argued that the amount of property tax levied in each area municipality for education ought to be in proportion to the rateable property in a given municipality to the total rateable property. The general intent is found in the following quotation

> "The combined resources of the entire area are to be made available to support education and to overcome the most serious inequities of the present situation..."(Report of the Ontario Municipal Board, 1953).

Lately, it has been recognized that the system has not worked that well since two municipalities, Toronto and Etobicoke

contribute relatively more toward the education levy than other municipalities, largely due to their higher commercial-industrial assessment. (Advisory Task Force on Assessment Reform, 1987) Table 1 and Figure 1 show the discrepancy which has been exacerbated by declining provincial support for education finance. A variety of solutions to this particular problem have been advanced and these will be discussed in a later section of the paper.

## F. Financing Elementary and Secondary Education in Other Jurisdictions: Canada, United States and Australia

### F.1 Canada: A Statistical Overview

The most noticeable trend in education finance in Canada in recent years has been the shift away from reliance on local revenues (mainly from the property tax) to the assumption of greater financial responsibility on the part of the provincial governments. Table 2 indicates clearly what has been happening. The change Canada-wide has been dramatic as Figure 2 illustrates.

In the early 1950's, local governments were responsible for almost 60 per cent of the cost of local education. By 1975, this had been cut in half to just under 30 per cent and while not as dramatic, the decline has continued into the

TABLE 1

Education Expenditures and Levy by Area Municipality

1987

| Area Municipality | Percent of Total Education Budget | Percent of Total Local Levy | Difference |
|---|---|---|---|
| Toronto | 29.8 | 41.7 | -11.9 |
| N. York | 22.2 | 22.2 | 0 |
| Etobicoke | 11.6 | 15.3 | -3.7 |
| Scarborough | 25.6 | 14.2 | +11.4 |
| York | 6.3 | 3.3 | +3.0 |
| East York | 4.5 | 3.3 | +1.2 |
| Total | 100.0 | 100.0 | 0.0 |

Source: Sharing The Levies, Metropolitan Toronto Task Force on Assessment Reform, 1987.

## TABLE 2

### Government Outlays on Elementary and Secondary Education 1950-1985: Canada (selected years)

| Year | Federal | Provincial | Local | Total |
|---|---|---|---|---|
| | (as a percentage of the total) | | | |
| 1950 | 3.6 | 37.8 | 58.6 | 100.0 |
| 1955 | 4.0 | 41.5 | 54.5 | 100.0 |
| 1960 | 4.1 | 43.5 | 52.4 | 100.0 |
| 1965 | 6.2 | 48.3 | 45.5 | 100.0 |
| 1970 | 5.9 | 57.4 | 36.7 | 100.0 |
| 1975 | 2.7 | 68.3 | 29.0 | 100.0 |
| 1980 | 2.7 | 68.3 | 28.5 | 100.0 |
| 1981 | 2.7 | 70.6 | 26.7 | 100.0 |
| 1982 | 2.7 | 73.1 | 24.2 | 100.0 |
| 1983 | 2.7 | 72.2 | 25.0 | 100.0 |
| 1984 | 2.9 | 71.5 | 25.6 | 100.0 |
| 1985 | 2.8 | 70.9 | 26.3 | 100.0 |

Source: Statistics Canada, Financial Statistics of Education and Historical Compendium of Educational Statistics from Confederation to 1975.

1980's. Although it is not a large share, the federal component of funding has also declined from over 6 per cent in 1965 to under 3 per cent by 1985.

The Canadian data masks differences across the provinces. In the Atlantic Provinces, Quebec and the Territories, local financial responsibility is very low whereas in Ontario and some western provinces it is close to fifty per cent. More on the other provinces later. Ontario is an interesting case in this context. As Table 3 and Figure 3 indicate, the provincial share of elementary and secondary education has declined from approximately 60 per cent to 50 per cent over the decade since 1974.

These changes in financial responsibility have impacted on the importance of education expenditures in each level of government's budget. At the provincial level, school financing went from 10.5 to 19 per cent of this budget in the space of 20 years but has declined since than as the share of the public sector's budget devoted to eeducation has declined. Canada-wide, the local sector's share of the budget directed toward education fell from 23.1 per cent in 1960 to 13.4 per cent in 1982 and has increased slightly since then. (See Table 4)

The general, although not universal, shift toward greater financial responsibility has been the result of three main forces; fairness in terms of how the money is raised; fairness in terms of access to education and recognition of local variations in ability to raise revenue. Many provincial governments were convinced (by ratepayers to a large extent as well as local governments) that the

TABLE 3

Government Outlays on Elementary and Secondary Education in Ontario 1974-85

(Percentage of Total)

| Year | Federal | Federal Plus Other | Provincial | | Local | |
|---|---|---|---|---|---|---|
| 1974 | | 2.0 | 60.6 | | 37.4 | |
| 1975 | | 1.8 | 53.9 | | 44.3 | |
| 1976 | | 1.7 | 56.5 | | 41.8 | |
| 1977 | | 1.8 | 54.6 | | 43.6 | |
| 1978 | | 2.2 | 53.3 | | 44.5 | |
| 1979 | | 2.3 | 52.1 | | 45.6 | |
| 1980 | | 2.5 | 51.8 | | 45.7 | |
| 1981 | | 2.8 | 51.2 | | 46.0 | |
| 1982 | | 3.1 | 49.9 | | 47.0 | |
| 1983 | 1.5 | 2.9 | 53.0 | 49.2 | 45.5 | 47.9 |
| 1984 | 1.5 | | 51.9 | | 46.6 | |
| 1985 | 1.4 | | 51.7 | | 46.9 | |

Sources: See Table 2 and Ministry of Education, Ontario

Note: For 1983 - the source of data difers from the 1974-83 period.

TABLE 4

Expenditure on Elementary and Secondary Education As a Percentage of Total Government Expenditures

(selected years)

| Year | Federal | Provincial | Local | All Governments |
|---|---|---|---|---|
| 1950 | 0.5 | 10.5 | 21.8 | 8.3 |
| 1955 | 0.5 | 14.4 | 20.4 | 8.4 |
| 1960 | 0.8 | 15.3 | 23.1 | 11.0 |
| 1965 | 1.6 | 17.4 | 22.9 | 13.7 |
| 1970 | 1.8 | 19.0 | 21.1 | 15.0 |
| 1975 | 0.6 | 17.4 | 16.0 | 11.7 |
| 1980 | 0.7 | 16.6 | 15.4 | 11.6 |
| 1981 | 0.6 | 16.8 | 15.3 | 11.4 |
| 1982 | 0.6 | 15.9 | 13.4 | 10.3 |
| 1983 | 0.6 | 15.1 | 13.9 | 9.9 |
| 1984 | 0.5 | 14.9 | 14.2 | 9.6 |
| 1985 | 0.5 | 14.3 | 14.4 | 9.3 |
| 1986 | 0.5 | 13.9 | 14.9 | 9.1 |

Source: Statistics Canada, Financial Statistics of Education and Historical Compendium of Educational Statistics from Confederation to 1975.

property tax which constituted the dominant tax base locally, was unfair, regressive tax. We shall look at this more closely later. Rather than look toward new local tax bases, provincial governments absorbed more of the local education costs. In terms of access to education, provincial governments became more and more aware that needs differed across school boards and that education was too important to allow school boards to address these needs individually. The need issue was inextricably limited to the ability to pay issue. Municipal areas that have high property values or significant 'expensive' commercial assessment may be able to afford greater per pupil expenditure than a less wealthy district, even if they impose lower than average mill rates. The response was to increase the centralization of funding for schools through a variety of reforms such as pooling all the non-residential assessment or consolidating school districts into mega-boards.

## F.2 Patterns of Finance in Canada

The degree to which local governments rely on the property tax as a base for local expenditure depends very much on how the province finances local (elementary and secondary) education. In two provinces, Prince Edward Island and New Brunswick, education is the financial responsibility of the provincial government and consequently, only 37 and 45 per cent respectively of total property tax revenue is assigned to the local level. The remainder

is in the hands of the Province. In Manitoba, British Columbia and the Yukon/NWT, provincial property taxes are used to finance local education. In British Columbia the provincial government levies and collects the education portion of all property taxes imposed on the non-residential sector and reallocates these funds to school boards according to a formula that is based on factors other than local wealth or income. In Manitoba, the provincial government imposes an education levy, tied to property assessment on all property owners that is redistributed back to the school districts. Alberta has a scheme similar to that used in British Columbia. A review of the statistics on property taxes and the collecting agent reveals over the last 20 years, an increasing share of elementary and secondary school costs are being supported by a provincial-wide property tax assessment. Several provinces collect little or no provincial property tax for any purpose. In Quebec, approximately 95 per cent of the cost of elementary and secondary education is financed by provincial grants. The remaining 5 per cent of total expenditures is financed by a local property tax, largely for expenditures that are demanded by local constituents but exceed the minimum level of provincially-mandated per pupil expenditure.

In summary, local property taxes are not used to fund education in the Yukon and in the Northwest Territories. In the ten provinces, per capita local property taxes for education expenditures range from $53 in British Columbia to $399 in Ontario with a national average (in 1986) of $218. The various arrangements are summarized in Table 5.

## TABLE 5

### Financing Education in Canada: Provincial Arrangements

| Province | Degree of Provincial Support | Provincial Levy on Property Value To Finance Education | Local Property Tax Levy | Equalization |
|---|---|---|---|---|
| NFLD. | 95 percent | | 5% for education from property/poll tax | |
| N.B. | 100 percent | Yes: non - residential | | |
| N.S. | | | Yes | |
| P.E.I. | 100 percent | Yes | Option | |
| QUE. | 95 percent | | Yes | |
| ONT. | 45 percent | | Yes | Yes: to a limit |
| MAN. | | | Yes | Yes: to a limit |
| SASK. | | | Yes | Yes: to a limit |
| ALTA. | | Yes: non - residential non - agricultural | Yes: residential | Yes |
| B.C. | 55 percent | Yes: non - residential | Yes: residential | Yes |

## F.3 The United States

Local revenue for schools is raised almost exclusively from the property tax. The tax base in terms of per pupil assessment in school board districts and across states varies considerably.(Grewal,1981) This has led to a wide variety of state and federal government assistance to reduce these regional fiscal disparities. By the mid 1980's state governments were providing nearly 50 percent of the total resources needed to finance education and in one-half of the states, the share is well over 50 percent. These payments were initially of the "flat grant" type but only helped to raise total revenue everywhere and they did little to equalize differences in fiscal capacities. These were followed by foundation grants, percentage equalization grants and district equalization grants. A brief description of these grant schemes is shown below.

### i) Foundation Grant

This type of grant was mentioned earlier in an overview of Ontario's history of education finance. The form most widely used in the U.S. is

$$S_i = E^* P_i - t^* B_i$$

where
- $S_i$ = the grant to the ith school district
- $E^*$ = the stipulated minimum level of expenditure
- $P_i$ = the student population
- $B_i$ = equalized assessed property tax base
- $t^*$ = the mill rate the state expects the school board to establish

Like the current Ontario grant, wealth neutrality is restricted up to the level of per pupil expenditure indicated by $E^*$.

ii) Percentage Equalization

The basic formula for this grant is given by

$$S_i = k*E_i$$

where $$k = f\frac{B_i}{P_i}$$

Here, k is a matching rate (somewhere between 0 and 1.0) that augments $E_i$, the state-determined per pupil expenditure on education. As per student equalized assessment falls, the value of k rises, providing an incentive for the school board to increase spending, depending on the formula governing the relationship between k and $(B_i/P_i)$.

iii) District Power Equalization

The formula for this grant is

$$S_i = t_i(B_a - B_i)$$

where $t_i$ = the given tax rate
$B_a$ = is the average equalized assessment per student across all school districts
$B_i$ = the ith districts equalized assessment per student

The purpose is to equalize per student revenue which various jurisdictions obtain from imposing a given tax rate, even though their per student tax base differs.

### F.4 Australia

Apart from Commonwealth Territories, there are only six systems of education in Australia; one for each state and the disparity in wealth among them is not very significant.(Grewal, 1981) Consequently, instead of state (provincial) financial assistance to local governments, the senior government assistance comes from the Federal government. The objective of this assistance is to raise the level of spending on education in each state to a designated target. The entitlement is the gap between a given state's per pupil spending in the base period and the target level, which is set by the federal government. To obtain the grant, a state must maintain its current budget spent on education, preventing a "flow through" of the grant to other state expenditures.

## G. Major Concerns About Property Taxation

If we are to seriously consider alternatives to the property tax as a means of financing all or part of the cost of local education, we should be clear as to the strengths and weaknesses of this tax. The following attempts to provide such an overview.

Property taxes are one of the oldest forms of taxation found in Canada and still provide the bulk of municipal government revenues. In 1988 the yield of the real property tax and other property related taxes such as business and personal property taxes and special assessments exceeded $20 billion. Not only is the property tax the second largest source of revenue for the provinces and the municipalities considered together, but it is the fourth largest source of revenue for all three levels of governments after personal and corporation income and sales taxes.

Despite the prominent position that the property tax occupies in the Canadian fiscal structure, the tax is highly unpopular. No other major tax has been subjected to such hostile and persistent criticism. The tax is charged with being regressive, of being unfairly administered, of discriminating against property intensive industries, of distorting the location of economic activity, of contributing to the development of urban slums, and so forth. Yet, despite these criticisms, the tax has persisted. The explanation for this is twofold: First, the property tax is an old institution and people have become accustomed to it; and secondly, it is difficult to find a workable alternative to the real property tax as the major revenue source of local governments that would not drastically reduce either local autonomy or fiscal responsibility.

## G.1 Property Tax Base

In Canada, real property forms the municipal tax base in all provinces and involves both land and buildings. Remnants of the personal property tax base can be found in other provinces where manufacturing machinery, fittings and fixtures, which are normally regarded as personal property, are included in the definition of real property. Personal property is much more extentively taxed in the United States than in Canada.

### i) Assessment

A fundamental problem encountered in the implementation of the property tax, which is not encountered in the operation of income or sales taxes, is that of valuing the tax base. In principle, the base of the tax should be measured by the current market value of all real property in the taxing jurisdiction. Evidence of market value, however, is difficult to obtain because only a relatively small percentage of properties are sold in any year. In the absence of market information, the value of all real property must be assessed to determine the local tax base. In general, there are three techniques or approaches that can be used for assessing property values:

(a) Evidence of land and building values can be obtained by looking at sales of comparable types of property adjusted for difference in size, location, access and other physical

characteristics of the property.

(b) Where sales data are unavailable, evidence of building value can be obtained by estimating undepreciated reproduction costs of buildings, using manuals of construction costs and tables of depreciation rates for structures of various ages. This method is difficult to apply in practice because while current constuction costs can be estimated fairly accurately, the loss in value due to physical wear and tear and obsolescence is difficult to determine.

(c) Finally, assessors may use capitalized net earnings as a basis for assessing the value of property. For example, if the net rental income of an apartment building is known, the value of the building can be estimated by capitalizing the net rents using an appropriate discount rate for this purpose. The difficulty with this method is that it is difficult to determine the discount rate to be applied to net earnings even if these are known. The capitalization rate applied by assessors, for example, may not coincide with that of prospective purchasers. Generally an attempt is made to assess property at 100 per cent of its fair market value, which is defined as the price that a willing buyer would pay a willing seller of the property in an arm's length transaction. This standard, however, is difficult to achieve in practice because of the inherent difficulties of valuing property where sales are infrequent. Some deviations are to be expected, therefore, in average assessment/sales ratios

for the same type of property within a jurisdiction. However, numerous and widespread departures from the average assessment/sales ratio in a municipality provide a clear indication that something is wrong with the method of assessment. Experience has shown that where sales are plentiful and assessments are made at market value, a spread of up to 10 percentage points on either side of the ratio may be acceptable, and where sales are infrequent, a range of up to 15 per cent on either side of the ratio is the best that can be expected.

Studies have shown that municipalities consciously attempt to assess different types of property at different fractions of their true market value. Thus in comparing assessments of vacant land and buildings, the level of assessment was lower for each category of vacant land in each municipality studied than in the corresponding level of assessment on land and building combined. Similarily, in most municipalities business properties and apartments were assessed at a higher perceentage of market value than private residences.

The widespread deviations found in assessment/sales ratios among different types of property and within similar types of property in the same municipality led an Ontario Committee to conclude that "the majority of dwellings other than apartments in the municipalities concerned for the years 1961-1963 were assessed with a degree of inaccuracy that deserved public censure."

(Government of Ontario, 1967)

The findings of the Ontario Committee have since been confirmed in more recent studies.(Boadway and Kitchen, 1980) They show that the ratio of assessed to market value of single family residential properties in each of the areas that were amalgamated into the new city of Cambridge in southern Ontario in 1977 deviated widely from the median assessment/sales ratio for that type of property. In Galt, for example, homes were assessed at something between 28.4 per cent and 1.8 per cent of market value in the same year when the median assessment/sales ratio for this type of property was 9.97 per cent. Again official studies prepared for the Commission on the Reform of Property Taxation in Ontario (1977) show that multi-unit buildings (more than six residences) were over assessed in relation to single family residences and that land as distinct from buildings in the region of Niagra (southern Ontario) was substantially undervalued for assessment purposes.

## G.2 The Incidence Of The Property Tax

The incidence of the property tax is controversial. One view is that the property tax is eventually reflected in higher prices of goods produced using taxed property and, therefore, would be borne by consumers. With this view of incidence, the property tax is regressive with respect to income because consumption falls as a proportion of income as income rises. Another view is that the tax is borne by the owners of property and is, therefore,

progressive because capital income tends to be heavily concentrated in the hands of upper-income taxpayers. We begin by examining the first of these views - a view that is now referred to as the traditional approach to the incidence of the property tax.

### i) The Traditional View

This view considers the property tax as being separable into its two principal components, the tax on land and the tax on structures. Proponents of this view assume that the supply of land is fixed by nature so that the tax on land must be borne by landowners. It cannot be shifted on to others by altering the quantity of land supplied. Land taxes, therefore, are capitalized into a lower selling price for land.

On the other hand, this approach assumes that the supply of structures is not fixed but can be altered through investment decisions. Since supporters of this view assume that in the long run the supply of structures is infinitely elastic at any given rate of return, it further follows that the tax on structures will be fully shifted forward to consumers of services produced by the taxed property.

Since previous quantitative estimates of the property tax in Canada have employed precisely these assumptions, it is not surprising that they have found the property tax to be highly regressive. Since these studies assume that most of the property tax is paid by consumers, and since it is further assumed that

consumption falls as a proportion of income as income rises, such a tax must obviously be regressive.

The results of these studies, however, must be accepted with a good deal of caution. To assume within any taxing jurisdiction that the supply of land is perfectly inelastic, that is fixed permanently, while the supply of structures is perfectly elastic (unlimited supply at a given price) is highly questionable. Land, for example, is not fixed in supply. New land can be created not only through land fill operations but also by altering municipal boundaries. Land taxes, therefore, will not be borne by landowners but will be shifted on to others by altering the supply of land.

A major problem encountered in traditional incidence studies is that the results of the studies have been based on assumed patterns of shifting that have not been empirically verified. For example, in quantitative studies of the incidence of the tax on rental housing, it is assumed that in the short run, the tax is fully shifted forward by landlords to tenants. This could occur, however, only if the demand for housing is perfectly price inelastic or that demand is not affected by price. This assumption is clearly unrealistic because poor people can and do in fact move to other areas. In view of the high mobility of the population in the country in general and within urban areas in particular, a completely inelastic demand for housing would seem at best a temporary phenomenon. Consequently, if the traditional analysis of the incidence of the residential property tax is to be applied properly, a good deal of empirical information about the

characteristics of the housing market in the particular area under study is required. Such information, however, has not been built into previous incidence studies so that the results of these studies must be viewed with a good deal of skepticism.

Another criticism that is made of traditional incidence studies is that the results of these studies overstate the regressivity of the property tax because they are based on current or measured income. Consumers, it is argued, make decisions on the purchase of long-lived assets, such as houses, on the basis of permanent or expected income and not on the basis of current income. The importance of this criticism is emphasized in a study by Aaron (1975) who found that when the incidence of U.S. residential property tax was measured against normal income, the tax was roughly proportional with slight progressivity for homeowners offsetting slight regressivity for renters. These results suggest that quite apart from any theoretical objections to the shifting assumptions underlying traditional incidence studies, the application of these assumptions does not support the traditional view that the property tax is highly regressive.

While there is a general agreement that the property tax looks more progressive when measured against permanent income, the significance of this finding for tax policy is not clear. It is questionable whether tax policy should ignore current incomes on the assumption that it will average out over the taxpayer's lifetime. After all, other taxes including both personal income and sales tax, are paid out of current incomes. Basing tax

payments on lifetime incomes would impose a particular hardship on pensioners who, because of either inadequate foresight or irrationality, failed to provide for a retirement income sufficiently high enough to meet their current tax obligations.

ii) The New View

In contrast to the traditional view of the incidence of the property tax that property owners (with the exception of owner-occupiers) do not pay the tax but shift the tax to consumers and tenants, a "new view" of property tax incidence has emerged in recent years, which holds that property owners do pay the tax - not just the property owners on whom the tax is levied but all property owners.

This "new view" of property tax incidence is now largely associated with the work of Peter Mieszkowski (1972) who applies Harberger's model of corporate tax incidence to an analysis of the property tax. In this model, it is assumed that the total supplies of labour and capital are fixed, that product and factor markets are perfectly competitive and that factors receive the value of their marginal products. It is further assumed that capital is perfectly mobile between industries and different regions, so that in the absence of differential risk, the after-tax rate of return on all capital is equalized. Given these assumptions, Mieszkowski argues that a uniform national tax applied to capital will not be capitalized in lower asset prices but will reduce the income yield

of such assets by the amount of the property tax and thus will be equivalent in its incidence to an income or profits tax. Since the burden of the property tax falls on capital owners, and since income from capital is concentrated among upper-income groups, the incidence of the property tax will be progressive.

A simple example will help to illustrate this argument. Suppose that a particular piece of land yields an annual rental income of $2,000 a year and that the market rate of interest is 10 per cent, then the capitalized value of the land is $20,000 (that is,2,000/.10). If a 2 per cent site value tax is levied against the value of the land, the annual rental income falls to $1,600, and the capitalized value of the land falls to $16,000 (that is, $1,600/.10). The tax is fully capitalized because the tax does not affect the discount rate - that is, the market rate of interest that can be earned on alternative investments. No investor will pay more than $16,000 for the land, since this sum of money can be used to purchase other investments not subject to the property tax, which yield a 10 per cent rate of return.

The result, however, differs if a uniform 2 per cent rate of tax is applied to the value of all property in the economy. The application of a national capital tax reduces both the annual yield from capital and the discount rate, that is, the net rate of return on capital. Thus, in contrast to our previous example when the property tax was applied to only one particular parcel of property, the tax is not capitalized. The tax reduces the annual yield to $1,600 and the discount rate to 8 per cent, so that the capitalized

value of the property remains at $20,000. Such a tax is equivalent to a 20 per cent income or profits tax, since the effect of the tax is to reduce the income yield of the property by 20 per cent - that is, from $2,000 to $1,600.

The property tax, of course, does not apply equally to all capital goods. Not only is a large part of real property tax exempt but that part, which is taxed, is taxed at varying average effective rates both within and between taxing jurisdiction because of differences in assessment practices.

These tax differentials produce what Mieszlowski refers to as excise tax effects: that is, changes in commodity prices that are induced by the flow of capital from high-taxed to low-taxed jurisdictions. Assume, for example, a nation composed of three communities. In A, the average rate of property tax is 4 per cent; in B, it is 3 per cent; while it is 2 per cent in C. The national average rate applied to all capital is, therefore, 3 per cent.

If in the absence of the property tax, the before-tax return on capital is, for example, 10 per cent; then after the imposition of the tax, the after-tax rate of return on capital falls to 6 per cent in A and to 8 per cent in C. Under the assumption of perfect capital mobility, capital will flow out of A and into C in search of a higher rate of return. Eventually a new equilibrium is reached when the after-tax rate of return on capital is reduced from 10 per cent to 7 per cent - by the national average rate of tax applied to capital as a whole. In the new equilibrium the fall in commodity prices in C causes the before-tax yield on capital to

fall to 9 per cent, which after the payment of a 2 per cent property tax, leaves an after-tax yield of 7 per cent. In A, on the other hand, the rise in commodity prices must be sufficient to generate a before-tax yield of 11 per cent if after the payment of the property tax (4 per cent), the same net yield is to be obtained in A and in C. Thus the fact that the property tax is not applied in practice to all capital at a uniform rate does not change the basic conclusion that the global effect of the property tax is to depress the earnings of capital by the average rate of tax in the economy.

The property tax, therefore, exerts two separate effects on the distribution of income. First, the property tax reduces the income from capital by the average rate of property tax with the burden of the tax being distributed in proportion to the ownership of capital. Secondly, the tax redistributes real income from individuals in high-tax jurisdictions, where commodity prices have risen and factor prices have fallen, to individuals in low-tax jurisdictions, where opposite changes in factor and commodity prices have occured. To the extent that factor and commodity price changes cancel out in the aggregate - then the property tax falls on the owners of capital and has a burden distribution that is progressive with respect to current income. To the extent, however, that these changes do not cancel, then the incidence of the property tax is less clear cut. For example, if the property tax in high-tax areas falls on low-income workers and tenants who are likely to have a little occupational mobility, then the net

distribution impact of inter-jurisdictional shifts will be regressive. In this case, the property tax will be progressive as the ownershiip of capital, modified by any regressive excise tax effects that occur.

There is no doubt that the conclusion of the H-M model - that the property tax is progressive - follows logically from its assumptions. The important question is whether these assumptions are in accord with reality. For example, this model assumes that the property tax does not reduce the total stock of capital but merely affects the allocation of a given capital stock between high-and low-tax communities. This is equivalent to assuming that the supply of capital does not depend on the net rate of return, that is, the rate of saving is unresponsive to the net interest return that can be earned on savings.

This assumption, however, is misleading for Canada which in relation to the United States is a small and very open economy, particularily with respect to capital flows across the border. These flows are likely to be quite sensitive to differences in effective property tax rates between the two countries. For example, if property taxes are increased in Canada, and comparable increases are not made in the United States, Canadians will be encouraged to invest more of their savings in the United States where they can earn a higher net rate of return on investment. Similarily Americans will be discouraged from making new investments in Canada.

To the extent, therefore, that the amount of saving made available for investment is sensitive to the rate of return, the property tax will reduce the size of the capital stock, and in the long run, part of the additional burden of the property tax will be shifted on to labour in the form of reduced real wages.

As the preceeding analysis demonstrates there is no simple and obvious answer to the question. Who pays the property tax? The traditional view appears to give the correct answer to this question if one is concerned with examining the incidence of a marginal increase in the property tax in a particular community. As we have seen, local consumers (who pay higher prices) bear a large part of the burden. Although product prices fall in other lower-taxed communities, that is not relevant where the effects within one locality are being examined. On the other hand, the new view is more likely to give the correct answer if a general increase in property taxes in all communities is being examined. In this case much of the burden of the property tax falls on capital owners, since excise tax effects are likely to cancel out in the aggregate. As Kitchen (1987) recently reported; "Much of the difference in the incidence pattern that arises...can be explained by the age composition of the different income groups." (p.962) Clearly, however, much more careful empirical testing of the shifting assumptions underlying both the new and the old view of property tax incidence must be undertaken before either view can be accepted with a high degree of confidence.

## G.3 Economic Effects

Much of the criticism of the property tax has rested on considerations of equity, but the tax has also been strongly criticized on economic grounds. The tax, for example, is said to discriminate against consumer expenditures on housing because it amounts to a very high excise tax in relation to personal income (probably on the order of 15 to 17 per cent for Canada). Any tax that distorts consumer expenditures in this manner is considered to be objectionable on welfare grounds because society attaches a very high value to home ownership. Undoubtedly, rising property tax rates have served to reduce the consumer demand for housing to some extent by increasing the monthly carrying charges that must be paid to purchase a new home that is mortgage financed. Moreover, the deterrent effects are likely to be greater in Canada than in the United States, since homeowners in this country cannot deduct their property taxes in computing their personal income tax liabilities. However, the deterrent effects of the property tax on housing construction should not be exaggerated. Much of the revenue collected from the property tax has gone to finance school construction in suburban areas where much of post-war Canadian housing has been built. To the extent that the property tax can be looked upon as the tax price paid for the consumption of municipal services, including education, it can be considered a true benefit based levy that is neutral or non-distorting by definition.

The property tax may also distort business choices, causing firms that use large amounts of real property to substitute labour for capital in order to reduce their property tax liabilities. The distorting effect of property tax on the choice of factor inputs is not likely, however, to be of great importance because labour costs constitute a much larger share of the net income of Canadian manufacturing corporations than does the property tax, so that the cost advantages to be obtained from substituting capital for labour clearly outweigh any property tax disadvantages in making this substitution.

While the non-neutrality of the property tax may not lead to substitutions of labour for capital, it may produce some distorting effects on the allocation of resources between industries, such as the railways, to the advantages of their less capital intensive competitors, such as the trucking, shipping and air transportation industries. The predominant position that the railways enjoyed at the end of the nineteenth century would have undoubtedly been weakened in any event by the development of other competing forms of transportation, but the heavier tax burden imposed on land-oriented industries served to hasten this decline.

The presence of local property tax differentials may also distort the allocation of resources if they induce business firms to migrate to low-tax areas where, on consideration of economic efficiency, they would not otherwise have gone. There is surprisingly little evidence, however, that business is attracted to low-tax areas. Access to markets, availability of labour supply

and the possibility of obtaining industrial land at a cheaper price in the suburbs than in the central core of the city are more important factors than taxes in influencing the locational choices of business firms.

Much of the criticism of the property tax in the United States has centred on the alleged effects of the tax in contributing to the economic deterioration of the large American city.(Netzer, 1966) The post-exodus of white middle-class Americans to the suburbs has resulted, it is argued, in a substantial loss of the tax property tax base for the central city. This has created a serious problem of fiscal imbalance in the budgets of central city governments because of the need to provide health, educational and welfare services to the poor who have remained behind, as well as other municipal services to those who work in the city but reside and pay taxes in the suburbs. To finance these expenditures, property tax rates have had to be increaseed in the central city, which has induced a further outflow of homeowners and business firms to the suburbs where tax rates are lower. This has resulted in a further deterioration in the economic position of the central city vis-a-vis the suburbs. (Auld and Cook, 1972)

There is little evidence that the property tax has contributed to the economic decline of major cities (such as Toronto and Montreal) in Canada that have undergone rapid industrial and commercial development in recent years despite the presence of high rates of property tax. This is perhaps partly due to the greater movement toward regional government in Canada (as in the case of

Metropolitan Toronto) than in the United States, which has resulted in a more equitable division of the tax base and sharing of the revenues between various municipalities.

Apart from the effects noted previously, the property tax is also said to discourage urban redevelopment because the tax applies to improvements as well as to land. Thus a developer may be dissuaded by the property tax from tearing down slum housing to erect a high-rise apartment building because if he does so, he can expect, under current assessment practices, an increase in his property taxes that may exceed the prospective return on the building. The effect of taxing improvements, therefore, is to discourage investment in new construction and rehabilitation. The solution, it is argued, is to tax only land and not improvements. The benefits to be obtained from site value taxation (as it is called) are said to include "an increased rate of investment in new and better structures, less speculative withholding of land from development and reduced 'urban sprawl.'(Netzer, 1966, p.205)

## H. The Options

Discussion of the alternatives to the current system of financing elementary and secondary education in Ontario ought to be predicated on what it is that is undesirable about the current system. As noted earlier, the dissatisfaction could lie with the overall results of the present system, in terms of wealth neutrality or how costs are shared in metropolitan Toronto or, as

discussed in section G above the desire for change may be stimulated by the lack of support for property taxation as a major source of revenue. We will discuss each of these in turn.

## H.1 Grant Schemes and Pooling Assessment

If the major source of unhappiness is the unequal access to education, this can be eliminated by moving to a grant scheme such as the Variable Percentage Grant Plan (before the imposed ceilings) that was in effect before 1977. No matter the level of taxation chosen (locally) the province would provide an equalization grant that would raise per student property assessment up to the level of the wealthiest jurisdiction. There would be no concern that the mill rate in a less wealthy community need be any higher than in a rich school district to raise the same dollar of tax revenue.

With the current system of equalization grants, the restricted wealth neutrality can be made less restrictive by pooling all non residential assessment at the provincial level and flowing the money back to school boards by way of per student grants. British Columbia imposes a scheme of this type and it has been advocated in Ontario.(Ministry of Education, 1984; Government of Ontario, 1985) This eliminates the situation where a school board, located in an industrial/commercial rich area, can raise more tax revenue without raising the tax on residential property than in an area

where the commercial/industrial mix is relatively low.[8]

In all, there are good reasons to assign the non- residential property tax to the Province or at least pool the assessment. (See British Columbia, 1988) The incidence is generally believed to be borne widely, certainly to a significant extent, outside the local community. If it is treated like an excise, it is reflected in the price of goods and services, many of which are likely to be exported outside the local area. If it is viewed as a tax on capital, the ownership of much capital is widely distributed. On grounds of efficiency (the effect of the tax on private resource allocation decisions) it is desirable that the tax on business be uniform throughout the province. If not, industrial location may well be based on the tax, not economic considerations. Furthermore, a provincial tax on business assessment will have relatively greater stability, providing a more positive business climate. Finally, if it was deemed desirable to ensure that per capita spending on education be the same for all students in the Province, (adjusted for special factors), then all local property tax assessment for education could be pooled on the basis of a given mill rate and standard equalized assessment, and redistributed back to school boards as a conditional grant. Current equalization grant schemes, even without restrictions, only ensure equalizing up to what the local school board wants to spend. Variation in per pupil spending across districts can still prevail.

These options have assumed that local or provincial governments continue to use the property tax as a major source of

revenue to fund education. As noted in Section G, opposition to the property tax has been based on the perceived regressivity of the tax. If that, or other matters related to efficiency and assessment, are the main concern, then one must look for an alternative to property taxation. There is a 'new' view of property taxation that suggests the tax is more akin to a tax on capital and is therefore a progressive tax in some respects, or certainly less regressive. Even so, the inter-district differentials in property wealth, variations in assessment mix and practices may still condemn the tax in terms of being a good method to finance education. One alternative is to abandon (for education) the local and provincial (if it exists) property tax bases for education finance and in their place, provide per student grants from the provinces to the school boards. These would be financed out of whatever increases in general taxation the provinces thought was desirable. In essence, this is the system in Australia and in some Canadian provinces.

## H.2 Proposals From The Macdonald Commission

The idea of abandoning the property tax and replacing locally-raised property tax with provincial grants or a new personal income tax was rejected by the Commission (Ontario, 1985) on the grounds that:

> "...maintenance or enhancement of local financial responsibility and accountability should be reinforced."(p.44)

Although the Commission was "...guided by the ideal of equal opportunity"(p.45) it rejected full provincial funding "...given the administrative and political realities in the Province today".(p.45)

The Commission considered three options that continued to use the property tax as a source of educational funding. The first option can be expressed as

$$E^e = .80R_1 + .20R_2$$

where $E^e$ = the education expenditure
$R_1$ = the provincial grant
$R_2$ = the revenue derived from property taxes on industrial/commercial property

The mill rate on non-residential property would be set by the province.[9] Alternatively, the commercial/industrial assessment could be 'pooled' and returned as a per student 'tax grant'.

There are three major problems with this proposal:

1. The arrangement does not address the problem of wealth neutrality and the only 'guaranteed' per pupil level of expenditure is the funds from the grants plus the share of the non-residential tax going to a school district. By allowing any expenditure above the provincially-approved level to be financed by residential and farm property taxes sustains wealth inequities unless this too is fully equalized.
2. Vacating the residential and farm tax base creates an opportunity for local governments to raise taxes in these fields for non-school purposes.

3. The scheme appears to address the problem of the inequity of the residential tax but not the inefficiencies of differential property taxes on industry and business.

The second option reviewed by the Commission was an arrangement whereby expenditure is shared between three sources such that

$$E = .46R_1 + .22R_2 + .32R_4$$

where
- $E$ = expenditure on education in Ontario
- $R_1$ = revenue from the provinces consolidated revenue fund
- $R_2$ = property taxes from non-residential assessment
- $R_4$ = an education tax on personal income

The proposal does not discuss how $R_2$ would be levied; for example, would it be pooled revenue? by school district? with or without equalization? The special income tax would, presumably, be levied province-wide and the proceeds redistributed back to the school boards as per student grants. Again, this system does not address the problem of wealth neutrality unless the per pupil expenditure is fixed provincially and any local tax effort is fully equalized.

The third option was

$$E = .60R_1 + .22R_2 + .18R_3$$

where $R_3$ is revenue from the residential/farm property tax base. This is simply a variation on the current scheme, pushing the share of education to be financed from the province's consolidated revenue fund to a higher level.

The fourth proposal considered by the Commission is rather complex, involving property tax credits. The scheme can best be explained in the following way.

$$E = .46R_1 + .22R_2 + .32R_3$$

$$\frac{E}{N} = k$$

where $\frac{E}{N}$ = the per pupil approved expenditure

$k$ = constant, set by the province

If $\frac{E}{N} > k$ then the <u>total</u> cost of $\frac{E}{N} - k$ would be financed by a school board levied tax on residential/farm assessment.

Residential and farm ratepayers could claim a partial or full tax credit against provincial personal income on that part of $R_3$ used to finance <u>approved</u> per pupil expenditure. The cost of the credit would be paid for by special general surtax on personal income.

The scheme is not that different from the one where the province levies a special education income tax and provides school boards with their "fair share" (per pupil) amount of the total. The property tax credit scheme still requires one or more forms of equalization grants since school board districts have different per student assessments with respect to both tax bases. Furthermore, it does not address the issue of wealth neutrality.

## 3. Vouchers For Financing Elementary and Secondary Education

In May of 1985, the Ontario Minister of Education suggested in an interview that the voucher system of financing education warranted attention by his office. It is an old idea which from time to time is resurrected, debated and then buried again (Friedman 1955, Peacock and Wiseman 1964). The Minister's statement has once again introduced the concept into public debate and no analysis of education finance would be complete without a discussion of the voucher system.

A voucher system can best be described as

> "...the distribution to all parents of vouchers exchangeable for education at any school, state or private, that satisfies minimum education standards, the value of the voucher being related to the average costs of education according to the age of the child" (Blaug, 1967, p. 34).

Under a voucher scheme, public schools would charge a fee to cover costs. Private schools might well charge above the minimum and supply additional services. The scheme has its advocates and dissenters and it is useful to review the advantages and disadvantages of such a proposal.

### Advantages of the Voucher System

1. A 'double' system of education would provide competition among schools, raising the standards in both and encouraging innovation.
2. The schools would be much more responsive to the wishes of parents.

3. On a per pupil basis, expenditure on education would likely increase.

4. The property tax, with all its problems of fair assessment and equalization, would no longer be used to finance education.

5. A wider range of educational experience would be available allowing diverse preferences for education to be better satisfied.

Disadvantages of the Voucher System

1. The differences in education that would emerge would result in graduating students having very different skills.

2. The private schools would admit only the 'brightest' students and bid for the best students resulting in a two-tiered system of education, resulting in a social stratification in education.

3. Any extra financing for education would come from high income parents and only for their children.

4. Since education (above the minimum) would be distributed in accordance with wealth, the future earning capacity of those who already have wealth, would be enhanced, thereby 'locking-in' the existing distribution of wealth.

Further Reflections on the Voucher System

In the matter of the ability to pay for additional education (beyond the minimum expenditure required), the value of a voucher could be related to income and the number of school aged children in the family. The very wealthy could, conceivably, receive no vouchers while for the very poor, vouchers of 20, 30 or more per cent above the minimum expenditure required could be distributed. Since the voucher would be non-transferable and only be exchanged

for education, parents of children in poor families would be encouraged to send their children to schools of higher 'quality' or select a wider range of education activities.

More important, however, is the different role for the parents under a voucher system. The choice of education for children is likely to broaden considerably and the question becomes much more philosophical: how much of a role should parents have in selecting education services for their children?

At one extreme, it could be argued that maximum choice is desirable since parents are competent to make sensible choices. Income related vouchers and a minimum standard in public schools will ensure that significant mistakes cannot be made. If parents are 'trusted' to elect school boards, they are competent to choose the right schooling for their children. Others have argued that state, or public education is needed to save children from the choices of their parents. (Vaizey, 1962) Parents would, in choosing the education institution for their children, direct them in too narrow a fashion. A compulsory, common and broad education system allows for the full potential of a student to develop over time.

The most compelling argument against the voucher system is the tendency of such a system to reduce social cohesion and emphasize class, religious and race differentials. A voucher system would spawn schools dominated by religious groups and sects which would be in a position to 'capture' the minds of young people in perpetuating certain beliefs. There would be nothing wrong with

this unless, of course, such teachings led to intolerance towards other religions or those attending non-denominational schools. A state run, non-religious school system is a 'melting pot', and with an appropriate curricula, can teach tolerance, understanding and appreciation of all cultures and races. To ensure that a more heterogeneous system supported by the voucher scheme did not lead to social divisions through certain teachings, the curricula of all schools could be closely monitored. While this might be an effective 'watchdog' it would in part invalidate the basic objectives of the voucher system - the development of an independent, innovative school system.

There are certain practical issues associated with the voucher system. Would, for example, parents be able to choose a different school for their children each year? Could children of the same family attend different schools? Currently, the capital needs of school systems are planned on the basis of forecasts of urban and rural development plans and the changing distribution of school age children. A freely operating voucher system would render any planning obsolete. Attendance at any one school would parallel a stochastic process. Some planning would be necessary to prevent situations of considerable excess capacity or over crowding.

The unwillingness of governments to use voucher schemes for education can be traced not so much to the cogency of those opposing such schemes but to a lack of concrete answers to some very specific questions. It is likely that such a scheme would extend the range of choice in education, expand the private school

system and probably lead to more resources devoted to education. But society still needs answers to the following.

1) Can the competition among schools that would result from a voucher scheme be regulated to prevent misleading advertising?

2) Even if the vouchers are inversely related to income or taxed at family marginal tax rates, will they lead to a higher demand for education among disadvantaged groups?

3) Can 'balkanization' according to race, colour or religion, be limited?

4) What planning procedures would be required to ensure the optimal development of capital facilities and development of teachers?

The voucher system of education cannot be rejected outright but the uncertainty of its impact all but rules out its introduction in Ontario. A limited application of a voucher scheme might provide some answers to the questions above but such a social experiment is not likely to take place. The introduction of a voucher system at the post secondary level of education would provide much needed insight into the practical aspects of the scheme. Whether or not the results in this case could be applied to education finance at the primary and secondary level remains to be seen. We would, however, clearly have far more information than we have at present.

## H.3 A Personal Income Tax for Education

The idea of financing education through the personal income tax system is hardly a new one (Goode, 1962). Indeed, a

significant share of provincial income taxes are utilized in this way since grants to school boards are financed out of consolidated general revenues. As we have seen, the Macdonald Commission considered both a special income tax to assist in the financing of education as well as the utilization of a combination of property tax credits and higher income taxes.(Government of Ontario, 1985)

The provincial income tax could be used in two ways to fully fund education. First, as a substitute for the education component of the property tax each school board could levy an income tax to finance education. To raise revenue sufficient to offset the education component of property taxes in Ontario, there would have to be a tax rate in the neighborhood of 1.5 percent of total personal income across the province. In most school boards, this would produce an amount of revenue either greater than or less than the revenue from the property tax.

How 'feasible' is a local income tax for education? Canadian municipalities are not strangers to such taxes and even today, several countries have local income taxes.

For example:

i) In the U.S., personal income taxes account for approximately 5 per cent of total local revenue.

ii) The personal income tax accounts for 63 per cent of the total locally-raised revenue in Belgium while in Sweden, the comparable figure is 93 per cent.

iii) In Japan, the personal income tax accounts for one third of local, own - source revenue.[10]

While the collection of such a tax at the local level may appear to be difficult, it must be remembered that tax returns could be geo-coded, to each school board area and the tax collected as a part of the usual process of completing a tax return. The major attraction of using this tax base is its responsiveness to both real growth and inflation. For local services where the benefits cannot be assigned precisely to individual properties, the case for substituting an income tax is strong. Education is one such case.

How does such a tax stand up to the principles of a good tax? In the case of the ease of administration criteria, there would be significant start up costs to the introduction of a local personal income tax. However, once in place, and compared to all the difficulties associated with either up to date market value assessment or periodic re-assessment of property values plus the entire appeal process, a simple flatrate income tax, collected by the provincial or federal government, could be less expensive to administer.

As far as accountability is concerned, the type of income tax noted above should have a fairly high degree of visibility. If school boards have the right to set their own rate of tax, they will be able to match expenditure needs and revenue growth. This would be no different from the present system where the school trustees set the budget and then have this translated into the appropriate mill rate (after accounting for provincial grants).

Would the local income tax for education be non-distorting in terms of resource allocation? The answer depends on just what property taxes are being abandoned, what is happening to the assessment derived from commercial/industrial property and whether or not the income tax is being introduced in all or only selected school board districts. Suppose the income tax was levied only in Metropolitan Toronto to replace the residential tax. The non-residential sector continues to pay a property tax. Zero property taxes on residential properties would likely be capitalized and relative to the commercial/industrial sector, property values would rise with investment flowing to the higher expected net income. Competition within the residential sector would, however, dampen price increases. Individuals in the residential sector may find that their new income tax is higher than the property tax they once paid and could lead to some migration out of Metro to neighbouring areas. It could also lead to in-migration as households sought accommodation with zero property taxes. It would appear to be especially attractive to senior citizens whose income taxes would not be that high.

Would such a tax be an improvement in terms of equity? If ability to pay is deemed to be the most important characteristic for fairness and income the best measure of ability to pay, such a tax would be an improvement in terms of equity. If one, however, accepts the new view of the property tax (as a tax on capital), then the improvement is not quite so significant.

The three major problems would appear to involve national stabilization objectives, geographic wealth differentials and long range planning. A local school board income tax discriminates against poor areas. It would take a 4 per cent tax in the Brantford area to raise the same revenue as a 3 per cent tax in Oakville. Because of variations in per pupil income, an equalization grant scheme would be needed to ensure wealth neutrality. The stabilization objectives of national fiscal policy could be thwarted if the size of a local personal income tax rate became too large. Finally, while the income tax rate produces revenue that grows automatically with population and inflation, it can also decline in times of local, provincial or national recession forcing school boards to cut expenditure on education or rely on additional provincial grants.

There is one last problem to consider. If all property taxes are abandoned, at least locally for education, what happens to the commercial/industrial sector if the foregone revenue is replaced by a personal income tax? Communities with high non-residential assessment would require higher personal income tax rates (given equal per capita personal income). Industry and business profits would increase, causing an in migration of commercial/industrial capital to the non property tax sector placing more demands on local services.

The other option using an income tax to replace property taxes is simply to raise the provincial income tax sufficiently high enough to be able to abandon all or a portion of property taxes for

education purposes. The tax revenue would than be distributed back to school boards as a per student general grant, with other grants for special needs, transportation, etc... This would come close to achieving both wealth neutrality and equal consumption of educational services. The plan could be modified to allow local school boards to raise additional, but unsupported (provincially) funds by way of a limited property tax.

The drawbacks to such a scheme have been detailed in the Macdonald Commission and elsewhere. Would the 'tax vacuum' locally be filled by local councils? How can school boards be accountable if they have no taxation power? Would non-resident property owners escape taxation? What are the general equilibrium effects of shifting the tax burden from capital and household services to labour income? These are real difficulties, to be sure, but they must be weighted against all that is perceived to be wrong with property taxation and the wealth bias of the present system.

## I. Simulating Some Alternatives

The following simulations and results are designed to provide a very rough idea of the shifts and flows of monies that any change in the current system would impart on school financing. Precise estimates would require much further refinement of the model and data. They are based on data derived from Revenue Canada (1988) and Ministry of Municipal Affairs (1988).

i) Alternative A:

Consider the pooling of all Ontario non-residential education assessment at 1986 rates of tax and returning the tax revenue derived to each school board strictly on a student population base for 1986. The result is a major shift in revenues away from Metropolitan Toronto. Metro's non residential tax revenue for school purposes was $314.4 million or $1263 per student and total provinces revenue from non residential property tax for education was $700.8 million or $403 per student. If the pooled assessment and tax derived at 1986 mill rates was then returned to school boards, Metro-Toronto would receive approximately $100.3 million or $214.1 million less than Metro actually received under the current scheme.

ii) Alternative 2

Consider the case where Ontario abolishes all non-residential property taxation for school purposes and allows each school board to replace this with an income tax, the rate to be the same for all school boards. This would require a personal income tax (as a percent of total income) of just over one-half of one percent (0.57) to net the $700.8 million across the province. In Metro Toronto, this tax would net $197.8 million or $116.6 million less than the current taxation of non-residential property brings in. It would take a metro personal income tax of 0.91 percent to

produce the revenue equivalent to property taxation from non-residential assessment.[11]

iii) Alternative 3

As a slight variation of alternative 2, the province could replace the residential property tax with a personal income tax (the same rate for all school boards) and pools the non-residential property tax across the province, returning those proceeds to each school board on a per student basis.

This would require, across Ontario, a tax rate of three quarters of one per cent of personal income (0.77). In metro, this would produce $267.2 million, slightly below the $290.2 million collected through the residential property tax for school purposes. However, combined with the substantial short fall of revenue from the pooling of non-residential assessment, the total short fall under this scheme would be $237.1 million.

iv) Alternative 4

In this scheme, all property taxes for school purposes are abolished and a personal income tax of 1.33 percent of total personal income is levied. In metro, this would produce $461.5 million or $143.1 million less than the current system of property taxation. If proceeds of the personal income tax for education were returned to the school boards according to each board's

enrolment, Metro Toronto would receive $278.8 million or less than one half collected from the property taxes.

These examples are somewhat simplified. Nevertheless, they underscore one important fact. Any provincial-wide reform that replaces one or both tax bases at the local level with a personal income tax or, pools the assessment and redistributes the revenue on an enrolment basis will result in a loss of revenue for school financing for metro Toronto. What these reforms accomplish, however, is less disparity in wealth across school boards and hence, reduced need for equalization payments. The 'savings' could then be used to provide a guaranteed 'floor' to school boards such as metro-Toronto.

There are two additional 'metro Toronto only' alternatives that we have simulated. While both may appear to be outside political reality at the moment, they serve to underscore the special situation in metro Toronto.

v) Alternatives 5 and 6

First, consider a scheme where in place of property taxation to finance school expenditures, the Metro school board imposes a metro wide personal income tax and distributes the revenue on an enrolment basis to each district. Second, consider a scheme where each school district keeps the personal income tax collected in its district. The results are shown in Table 6.

## TABLE 6

A Personal Income Tax To Replace Education Property Taxes in Metropolitan Toronto (1986 Simulation)

| | Ea.Yk. | Etob. | Nor. Yk. | Scar. | Tor. | Yk. | Metro |
|---|---|---|---|---|---|---|---|
| A. A 1.74% tax on income yields--> | 0.66 m | 52.8 m | 121.4 m | 114.9 m | 290.2 m | 23.8 m | 604.6m |
| B. Per student payment of $2429--> | 26.9 m | 208.1 m | 136.6 m | 37.8 m | 160.3 m | 35.0 m | 604.6m |

## Differential Incidence

Replacing one tax with another not only has effects on the total revenue of jurisdictions but on individuals and families according to their income status. Information on property taxes paid by individual tax payers is not available but property taxes paid as a percentage of family income is available and is shown in column two of Table 7. To replace all property taxes for school purposes with an income tax would require a tax rate of 1.37 per cent. The "breakeven" point would be at the 6th decile of increasing average family income. Thus, if one subscribes to the view that the property tax is regressive, the proportional income tax reduces that element of regressivity. Like all tax reform, there are winners and there are losers.

TABLE 7

Differential Incidence: Replacement of the Education Property Tax With Proportional Income Taxation

| Income Class (decile) | Property Tax as a Percent of Mean Income | Education Share of Property Tax as a as a Percent of Mean Income | Proportional Income Tax (as a per cent of Gross Family Income) Needed to Replace Education Property Tax |
|---|---|---|---|
| 1 | 8.25 | 4.07 | 1.37 |
| 2 | 4.85 | 2.39 | 1.37 |
| 3 | 3.88 | 1.91 | 1.37 |
| 4 | 3.22 | 1.59 | 1.37 |
| 5 | 2.92 | 1.44 | 1.37 |
| 6 | 2.76 | 1.36 | 1.37 |
| 7 | 2.69 | 1.33 | 1.37 |
| 8 | 2.63 | 1.29 | 1.37 |
| 9 | 2.09 | 1.03 | 1.37 |
| 10 | 1.86 | 0.92 | 1.37 |

Source: Revenue Canada: Taxation Statistics, 1986; Ministry of Municipal Affairs, Summary of Ontario Municipal Statistics, 1977-86; Statistics Canada Survey of Family Expenditures, 1986.

## J. Summary and Conclusions

The desire to replace all or a portion of the property tax with alternative revenue sources to finance education stems from a dissatisfaction with property taxes themselves or the effect that the financing system, incorporating property taxes, has on the delivery of education itself. While the Ontario government has, through the post war years, become more involved in local education, each 'solution' to the current problem has been followed by new schemes to provide more equitable access to education using more efficient and fair sources of revenue while trying to preserve local autonomy. A variety of schemes have failed (a) to produce complete wealth neutrality and (b) quiet the critics of property taxation.

A good system of financing education is difficult to define because, in part, it depends upon one's view about the degree of centralization reflected in education policy. Nevertheless, there appears to be a consensus that the tax revenues used to finance education should be derived from taxes that do not distort choices of resource allocation in the economy and are deemed to be fair or equitable taxes; that is treating equals in an equal manner and treating unequals in a manner that reflects ability to pay. Furthermore, taxpayers ought to be aware of the tax they pay and those that provide the public service held accountable for the levies.

On the expenditure side, there is widespread agreement that

access to education should not be denied because of personal or local wealth. This is achieved through the provision of equalization grants that assist less wealthy communities to reach a mandated per pupil level of expenditure without imposing undue taxation on households in the form of higher than average mill rates. This works up to a point. Out of the $10 billion spent on education in Ontario in 1988, almost $2 billion was for expenditures over and above those recognized and assisted by the province. Not only are there significant differences in per pupil assessment across school boards but with varying ratios of non-residential to residential assessment, some school boards find it less burdensome to raise education dollars than others.

In Toronto, there is a unique problem. By virtue of the legislation establishing Metropolitan Toronto in 1953, there is one metro wide board and 6 municipal school districts. Each contributes to a central 'pool' of tax revenue according to a formula that weights non-residential assessment higher than residential assessment. The result is a mismatch between own-source revenue and expenditures since expenditures in each municipality are more closely tied to enrolment, not assessment.

Financing Education

While local sources of funding for education have becomee less important in recent years, in Ontario, the share of total education shouldered by local government has increased from 37.4 per cent in 1974 to 46.9 per cent in 1985. Virtually all of this local revenue

has been drawn from the property tax base. This has not been the case in other parts of Canada. New Brunswick and Prince Edward Island have no local property tax for education. In Quebec, only 5 per cent of local education is financed from a local property tax and in British Columbia, the province pools the non-residential assessment and flows the money from this tax back to school boards on the basis of need, enrolment, etc... In Australia, local property taxes are not employed to finance elementary and secondary education: the funds come from the state and federal governments.

Concerns About Property Taxation

One of the major reasons for wishing to reform the current system is dissatisfaction with the property tax. Unfair assessment results, a regressive impact on income distribution and undesirable resource allocation effects are alleged faults with the tax. To be fair, the property tax should be based on market value if it is to reflect wealth and ability to pay. Failing that, the assessment to market value ratio ought to be similar within and across jurisdictions in the province. The evidence shows clearly that these objectives have not been achieved and there are wide variations in the ratio of assessment to market value in municipalities in Ontario.

The question of property tax incidence is more controversial now than it was 20 years ago. Until the mid 1970's, it was widely recognized that the property tax was regressive; the ratio of tax paid to income declined as income rose. Alternatively, if the tax

is deemed to be shifted forward onto prices of goods produced using real estate, it is an excise tax and as such, is also regressive. These results are modified somewhat if average income over one's working lifetime, is used in place of current, annual income to measure the tax to income ratio. The tax becomes proportional at least. The fact remains that the tax has to be paid out of current income. It is little solace to the retired couple on a small pension that their lifetime income is higher than their current income.

A more modern view emphasizes that the property tax is, when considered a national tax, a tax on capital and since income from capital is concentrated in the hands of upper income groups, the tax is progressive and hence equitable. Since the tax is not uniform across all jurisdictions, there are differential effects similar to excise taxes as well. The conclusions of these analysis have been the subject of much careful scrutiny and a variety of measures employed to measure the incidence of the property tax. While the results are mixed, there would now seem to be a consensus that the tax at worst, is not as regressive as was once thought.

The property tax, as imposed in Canada, is not necessarily neutral in terms of resource allocation. Households and firms will take into account large differences in property taxes in making decisions regarding housing and location, especially if the differences in tax burdens are not reflected in different levels of public services.

The indeterminancy surrounding the property tax and the

strength of conflicting views on incidence and economic effects has been a stimulus for reform. Coupled with the lack of complete wealth neutrality in terms of the delivery of education, a variety of options have been suggested.

## Education Finance Reforms

To achieve wealth neutrality (where per pupil expenditure on education does not depend on differences in wealth between school board districts), grant schemes can be put in place to ensure that any level of per pupil expenditure is fully equalized. Alternatively, the level of ordinary expenditure can be set as a ceiling, regardless of what a school board wishes to do, thereby ensuring identical per pupil expenditure on education.

If the composition of the tax base is the major concern, it is always possible to pool the assessment from commercial/industrial property and distribute the revenue back to school boards on a per pupil basis. Such a reform will obviously result in winners and losers and mechanisms to 'buy' the support of potential losers would perhaps, have to be instituted to bring about reform. Inequitable tax burdens resulting from inconsistent assessment procedures can be reduced by ensuring that municipalities undertake periodic reassessment of properties or move to a system of market value assessment, to be updated on a regular basis.

Most recently, the Ontario Commision on Financing Elementary and Secondary Education considered several alternatives to the

current system including (1) increasing the provincial responsibility for education to 80 per cent, (2) fixing the maximum revenue to be derived from non-residential assessment and raising one third of the cost of education by levying a special income tax, (3) the use of the two current tax bases (residential and non-residential assessment) and provincial grants along with a personal income tax credit for residential taxes, (4) replacing the current system without 100 per cent provincial support for education. The Commission favoured option number 3.

Vouchers for education are another option and while the idea has been advanced on a number of occasions, it would appear that it is not likely to be seriously considered. It would be a radical departure from current practices anywhere in Canada.

The idea of a personal income tax to finance education costs is attractive for several reasons. If it was administered provincially, it would fit into the current system of taxation. It is considered a more fair tax than the property tax. The redistribution of the tax revenue back to the school boards would produce an education supply that was wealth neutral. Education, it is argued, is of such importance to the province that the level of service should be set by the province and through the use of a personal income tax, there will be uniform rates across the province. Aside from some administrative problems (that could eventually be overcome) and the fact that personal income rates would go up, the major opposition to this scheme has to do with local rights. Without the right to set their own tax rate to raise

a significant share of the cost of education locally, school boards would not be as accountable to the taxpayers as they are at present. It boils down simply to whether or not one believes in wealth neutrality, categorical equity or local self-determination. The income tax could be levied locally and combined with an education equalization grant, wealth neutrality (restricted or universal) could be achieved. The administrative costs would be higher.

Simulating Some Options

Once the theoretical issues are discussed and digested, there is the very important, practical matter; who stands to gain (or lose) either as a municipality or personally from any reform? The simulations undertaken in this study can be classified into three categories; effects on Metropolitan Toronto due to province-wide reforms; effects within Metro as a result of Metro-only reforms and effects on income distribution in general from one Ontario-wide reform.

Pooling non-residential assessment or total assessment, replacing part or all of the property tax with a provincial income tax and redistributing the revenue from such a scheme on a per pupil basis result in Metro receiving less education tax dollars than under the current scheme. For example, province-wide pooling of commercial-industrial assesment (for education) and returning the tax revenue to the school boards on the basis of enrolment would result in Metropolitan Toronto receiving $214 million less

than under the current system. Most of these schemes, however, reduce the wealth inequalities among school boards and as a result, there would not be the same need for equalization grants to low per pupil assessment boards. These 'savings' could than be used to offset some or all of the initial revenue loss experienced by more 'wealthy boards', such as Metro.

## The Special Problem of Metropolitan Toronto

The current arrangement within Metro results in a notable 'fiscal imbalance' for four of the six municipalities. In Scarborough and York, current expenditures exceed the municipalities contribution to the Metro levy. For Toronto and Etobicoke, expenditures are less than the revenue levy. Replacing the property tax in Metro with a personal income tax (the same rate everywhere) and distributing the proceeds of the tax back to the municipalities on a per pupil basis, would result again, in a 'fiscal imbalance' with Toronto and Scarborough contributing considerably more to Metro than they would receive back in grants.

## Incidence Effects of A Personal Income Tax

While municipalities are rightfully concerned how any reform will impact on their fiscal position, individuals are naturally concerned about the impact of tax reform on their after tax income. For Ontario, the property tax as a percentage of family income declines as income rises and replacement of the property tax for education with a proportional tax on total family income, benefits

those in the first five deciles of the income scale. The losses in the sixth, seventh and eighth decile are quite small and in the last two deciles, they are still smaller than the gains in the first two deciles.

## Conclusion

If it is assumed that major reforms to the property tax are going to be expensive and difficult, there are alternatives that are attractive from both the equity and efficiency point of view. These options could be structured to guarantee wealth neutrality, allowing local school boards some autonomy and provide at least some compensation for those school boards that would lose revenue as a result of reform. The precedent has been set. In 1989-90, the Province will provide $180 million to offset losses incured by school boards that are involved in coterminus sharing of the non-residential tax base. There are uncertainties and risks associated with any change but there are obvious gains as well. How these match up depends to some extent on one's view about the inadequacies of the property tax, the issue of local accountability and education, and the importance of equal access to education.

## APPENDIX A

### The Special Problem of Metropolitan Toronto

The unique situation involving school financing in the Toronto metro area has been outlined in earlier studies (Advisory Task Force on Assessment Reform, 1987). The following is a brief summary of the current financial arrangement.

Let the residential assessment in each of the six school districts be represented by $A_1^r, A_2^r, \ldots, A_6^r$ and the $A_1^r$ commercial/industrial assessment be $A_1^c, A_2^c, \ldots, A_6^c$. Let the $A_1^c$ weights on the assessment be g (for residential) and f (for commercial/industrial) such that $f > g$ and $0 < f; g < 1.0$.

The amount of assessment levied in the ith school district is

$$L_i = \frac{g*A_i^r + f*A_i^c}{\sum g*A_i^r + \sum f*A_i^c}$$

The weights are such that if a district has a relatively higher commercial/industrial assessment, it will "attract" a higher levy.

Expenditure on education ($E_i$) in each district is based among other things, on population ($n_i$), transportation ($T_i$) needs, special programs ($P_i$).

$$E_i = f(n_i, T_i, P_i)$$

and

$$\frac{E_i <}{\sum_i E_i >} = L_i$$

That is, the share of the total assessment paid for any given municipality may equal, exceed or fall short of expenditure on education in that municipality.

## APPENDIX B

### COTERMINUS SHARING OF THE NON-RESIDENTIAL ASSESSMENT BETWEEN PUBLIC AND SEPARATE BOARDS

The new policy provides for a change in the way in which the assessment of business partnerships and publicly traded corporations is shared among coterminuus school boards. As well, this initiative provides for the sharing of telephone and telegraph receipts among boards.

The new policy also preserves the existing rules concerning designation for individuals, sole proprietorship businesses and private corporations. The designation rules have worked well in these cases.

At present, the property tax assessment of a business partnershiip can only be designated to the separate system if all the partners are Roman Catholics and choose to support the separate school system. In other words, a partnership with ten partners, nine of whom are Roman Catholics and who wish to designate their school support to the separate system, would automatically have its taxes directed to the public system. The new rules for designation would establish that the assessment of a business partnership would be designated to the separate system in the same proportion that the partnership was held by Roman Catholics who elect to support the separate system. In the above example, 90% of the assessment would be designated to the separate system, where the nine Roman Catholic partners designate their support to the separate system.

Corporations already have the right to share their assessment on the basis that they may designate a portion of their assessment to the separate system in the same proportion that the corporation has Roman Catholic shareholders. This system works well for private corporations or small corporations where shareholders can be readily identified. It does not work so well for large publicly traded corporations where frequent ownership changes and stock held by other institutions such as pension funds, makes a significant designation to the separate system also impossible. This problem will be corrected by establishing that the assessment of publicly traded corporations will be shared between the public and separate school systems (in Ottawa-Carelton, this will include the French-Language Board) on the basis of the amount of residential assessment that each board has in the municipality.

A similar problem exists with reference to the revenues of telephone and telegraph companies. These companies pay 5% of their gross receipts to municipalities in lieu of paying property taxes on their lines and poles. These receipts are made up, in part, of the monthly household telephone bills that each of us pays. The municipality is required by law to share these revenues with the public school board. These funds totalled $85 million in 1988. Under the existing rules, none of this revenue goes to separate school boards. The new rules will establish that the education portion of these payments will be shared between school boards in the same area in the same proportion that they have residential assessment in the municipality.

Each of the proposed changes to the sharing of assessment and revenues is directed toward removing an inequity which has existed for a considerable period of time. It is acknowledged that such changes, in isolation, would result in a loss of revenue to the public school system. Accordingly, provincial grants to school boards will be increased to ensure that the public school system, on a province-wide basis, does not suffer a loss of revenue.

## FOOTNOTES

1. Some of the earlier studies that have looked at some of these issues are Ontario, Ministry of Education (1984); Government of Ontario (1985). See also Bird (1978), Mikesell (1984); Ridout (1978) and Taylor (1985).

2. It should be noted that these summaries do not take into account the fact that the levels of support for elementary and secondary per pupil are different. For a more detailed discussion of these schemes, see Auld (1985a).

3. For a discussion of the poll tax in municipal finance, see Kitchen (1989).

4. In the case of an economic recession, a flexible revenue system that sees tax revenues decline may cause difficulties for a jurisdiction that cannot borrow to offset a short run loss in operating revenue.

5. The awareness of taxes on the part of taxpayers in Ontario is explored in Auld (1980).

6. The case for the decentralized provision of local public goods is received in Auld (1986).

7. For a brief overview of these discussions and one of the earliest studies of wealth neutrality and education, see Feldstein (1975).

8. The concept of sharing tax bases where there are co-terminus public and private school boards has been introduced in Ontario. An outline of this new policy and comments on the effect of coterminus sharing is found in Appendix C. The impact on Metropolitan Toronto's school board, after the special increase in personal funding, will be an increased local levy of $2 per household. (Ministry of Education, 1989)

9. Although it is not explicitly discussed it is assumed there would continue to be some form of an equalization grant since a provincially-determined mill rate applied to all non-residential assessment would produce different levels of per pupil revenue across school boards.

10. For a more detailed overview of this issue and the composition of local government revenues in other countries, see Kitchen (1989) and Auld (1986).

11. While per capita income in Toronto is higher than the Ontario average, per capita commercial/industrial property assessment is even higher than the average in Ontario.

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